

REMARKS/ARGUMENTS:

Claims 11-20 are canceled without prejudice. Claims 1 and 21 are amended. Claims 1, 2, 4-10, and 21-30 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. § 112:

Claims 1, 2, 4-10, and 21-30 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner states that support for the limitation of an alignment arm that limits movement of the blade to the longitudinal axis is not provided in the specification. The Applicant respectfully traverses this rejection.

Figures 2-5 depict an apparatus with a blade whose motion is restricted to linear motion along the longitudinal axis. The Figures depict a wash tower/wick holder 5 that restricts the movement of the blade along the longitudinal axis. The cutting blade 4 is driven down through the wash tower/wick holder 5 and cuts through the cap 9. (Applicant's specification, at page 7, lines 3-5). The carriage assembly 2 continues downward until the alignment arm 6 encounters the sample tube cap 9. At the cap detection point, the piercing portion of the downward stroke begins and the carriage assembly 2 separates from the alignment block 8 and the latch trigger 18 is released. (Applicant's specification, at page 6, lines 22-25). Therefore, based upon the Figures and the Applicant's specification, a person of ordinary skill in the art would realize that the movement of the blade is limited to linear motion along the longitudinal axis.

Furthermore, one of the major advantages that the present invention provides is that it prevents motion errors in the piercing process. (Applicant's

specification, at page 1, lines 21-27; page 3, lines 17-22). Therefore, it naturally follows that movement of the blade should be limited to the direction of the piercing.

In light of the foregoing, the Applicant respectfully submits that claims 1, 2, 4-10, and 21-30 comply with the written description requirement. Withdrawal of this rejection is thus respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. § 102:

Claims 1, 2, 4-7, 21-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Mater (U.S. Patent No. 3,598,393). The Applicant respectfully traverses this rejection.

Claim 1, as amended, is as follows:

An apparatus for piercing container caps, comprising:

- a) a piercing blade having a longitudinal axis and a zigzagged cross-section that is perpendicular to said axis;
- b) an alignment arm for moving said blade in a linear motion along said longitudinal axis to pierce a cap on a container, comprising a carriage assembly for moving said alignment arm, wherein movement of said blade is limited to linear motion along said longitudinal axis; and means for driving said carriage assembly.

The Examiner states that the drill bit is limited to longitudinal movement because it is surrounded by a bore and a guide bit. The Applicant respectfully disagrees. In the passage quoted by the Examiner, the Examiner acknowledges, "Mater not only relies on a rotation motion for drilling but also a linear motion to push the drill bit into the pole to make a hole through the entire length of the pole." The Applicant respectfully submits that the fact that Mater uses rotation motion

means that movement is not limited to the longitudinal axis. However, in order to expedite the prosecution of the instant application, the Applicant amended claim 1 to indicate that the movement of the blade is limited to linear motion along the longitudinal axis.

Mater cannot render claim 1 obvious because Mater fails to teach or suggest that the movement of the blade is limited to linear motion along the blade's longitudinal axis. On the contrary, as acknowledged by the Examiner, Mater requires a rotation motion for drilling a drill bit into a pole. Thus, Mater teaches away from the present invention. It is a discovery of the present invention that the mechanical latch assembly provides reliability and consistency for the cap piercing cycles without utilizing or modifying any electronic components. It also provides more reliable obstruction detection and fewer motion errors. (Applicant's specification, at page 9, lines 7-9). The Z-shaped blade also cuts through the tube caps more easily and with less stretching of the elastomer, resulting in more consistent cut size and better venting. (Applicant's specification, at page 9, lines 4-6). Thus, by limiting the movement of the blade to the blade's longitudinal axis, motion errors and stretching of the cap elastomer is minimized.

In light of the foregoing, Applicant respectfully submits that Mater could not have anticipated or rendered obvious claim 1, because Mater fails to teach or suggest each and every claim limitation. Claims 2 and 4-7 depend from claim 1 and cannot be anticipated or rendered obvious for at least the same reasons as claim 1. Withdrawal of these rejections is thus respectfully requested.

Claims 21-27, likewise, have the limitation that the movement of the blade is limited to linear motion along the blade's longitudinal axis. Therefore, these claims are patentable over Mater for the same reasons discussed above. Withdrawal of these rejections is thus respectfully requested.

In the Advisory Action dated April 4, 2005, the Examiner states,

“Applicant has argued that since the bit (blade) of Mater spins, it does not meet the limitation of the blade movement being limited to the longitudinal axis. The Examiner respectfully disagrees. The spinning of the bit does not require moving the blade in any direction at all. The Examiner considers the phrase in the claim ‘wherein movement of said blade is limited to linear motion along said longitudinal axis’ to mean that the blade can only move up and down (i.e. only in the z-axis and not in the x or y axes). This is what Mater provides. Therefore, the claims remain rejected.”

The Applicant respectfully disagrees with the Examiner’s interpretation of what exactly “spinning” means. The Applicant submits concurrently herewith a page from the Webster’s Ninth New Collegiate Dictionary, wherein common definitions of the word “spin” are listed. One such definition of spin is “to revolve rapidly: GYRATE”. Revolving and/or gyrating require movement. Therefore, the spinning of the bit requires moving the blade. In the case of Mater, if the longitudinal axis is defined as the z axis, then spinning requires movement in the x-y plane.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103:

Claims 10 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,598,393 to Mater.

Claims 10 and 30 depend from amended claims 1 and 21, respectively, and as such include all the limitations of claims 1 and 21, and therefore, cannot be rendered obvious over Mater for the same reasons discussed above. Withdrawal of this rejection is thus respectfully requested.

Claims 8, 9, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,598,393 to Mater in view of U.S. Patent No. 3,310,990 to Zettel or U.S. Patent No. 3,273,248 to Halverstadt or U.S. Patent No. 1,485,460 to Johnston.

Claims 8-9 and 28-29 depend from amended claims 1 and 21, respectively, and therefore, cannot be rendered obvious over Mater for the same reasons discussed above. Zettel, Halverstadt, and Johnston cannot remedy the defect of Mater and none of the three references are relied upon by the Examiner for such. Instead, the Examiner cites the three references for teaching the use of gear rack teeth or saw teeth to securely hold two structures together.

In light of the foregoing, Applicant respectfully submits that the cited references could not have made claims 8-9 and 28-29 obvious, because the combination of references fails to teach or suggest each and every claim limitation. Withdrawal of this rejection is thus respectfully requested.

Applicant believes the foregoing amendments comply with requirements of form and thus may be admitted under 37 C.F.R. § 1.116(b). In addition, admission is requested under 37 C.F.R. § 1.116(b) as presenting rejected claims in better form for consideration on appeal.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6700 to discuss the steps necessary for placing the application in condition for allowance.

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Reply to Advisory Action of April 5, 2005 and Office Action of December 14, 2004

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

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Date: May 13, 2005

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1136 spill • spinster

b : to relieve the pressure of (wind) on a sail by coming about or by adjusting the sail with lines **4** : to throw off or out (a horse ~ed him)
5 : to let out : DIVULGE (~ a secret) ~ **vi** **1** **a** : to flow, run, or fall out, over, or off and become wasted, scattered, or lost **b** : to cause or allow something to spill **2** : to spread profusely or beyond bounds (crowds ~ed into the streets) **3** : to fall from one's place (as on a horse) — **spill-able** \ˈspil-ə-bəl\ **adj** — **spill-er** **n** — **spill the beans** : to divulge information indiscreetly

spill **n** (1845) **1** : the act or an instance of spilling; **esp** : a fall from a horse or vehicle or an erect position **2** : something spilled **3** : SPILL-WAY

spill **n** [ME *spille*] (14c) **1** : a wooden splinter **2** : a slender piece: as **a** : a metallic rod or pin **b** (1) : a small roll or twist of paper or slip of wood for lighting a fire (2) : a roll or cone of paper serving as a container **c** : a peg or pin for plugging a hole : SPILE

spill-age \ˈspil-ij\ **n** (1924) **1** : the act or process of spilling **2** : the quantity that spills : material lost or scattered by spilling

spill-li-kin \ˈspil-i-kən\ **n** [prob. alter. of obs. D *spelleken* small peg] (1734) **1** : JACKSTRAW **1** **2 pl** : JACKSTRAW **2**

spill-over \ˈspil-ə-vər\ **n** (1944) **1** : the act or an instance of spilling over **2** : a quantity that spills over

spill-way \-,wə\ **n** (1889) : a passage for surplus water to run over or around an obstruction (as a dam)

spi-lo-site \ˈspi-lə-sīt\ **n** [G *spilos* spot; akin to L *spina* thorn — more at SPINE] (1882) : a spotted schistose rock produced by the metamorphism of clay slate by magma

spilth \ˈspilth\ **n** (1607) **1** : the act or an instance of spilling **2** **a** : something spilled **b** : REFUSE, RUBBISH

spin \ˈspɪn\ **vb** **spun** \ˈspʌn\; **spin-ning** [ME *spinnen*, fr. OE *spinnan*; akin to OHG *spinnan* to spin, L *sponte* voluntarily, *pendere* to weigh] **vi** (bef. 12c) **1** : to draw out and twist fiber into yarn or thread **2** : to form a thread by extruding a viscous rapidly hardening fluid — used **esp.** of a spider or insect **3** **a** : to revolve rapidly : GYRATE **b** : to feel as if in a whirl : REEL (my head is *spinning*) **4** : to move swiftly **esp.** on wheels or in a vehicle **5** : to fish with spinning bait : TROLL **6** **a of an airplane** : to fall in a spin **b** : to plunge helplessly and out of control ~ **vt** **1** **a** : to draw out and twist into yarns or threads **b** : to produce by drawing out and twisting a fibrous material **2** : to form (as a web or cocoon) by spinning **3** **a** : to stretch out or extend (as a story) lengthily : PROTRACT — **usu.** used with **out** **b** : to evolve, express, or fabricate by processes of mind or imagination (~ a yarn) **4** : to cause to whirl : TWIRL (~ a top) **5** : to shape into threadlike form in manufacture; **also** : to manufacture by a whirling process

spin **n** (1831) **1** **a** : the act of spinning or twirling something **b** : the whirling motion imparted (as to a ball or top) by spinning **c** : an excursion in a vehicle **esp.** on wheels **2** **a** : an aerial maneuver or flight condition consisting of a combination of roll and yaw with the longitudinal axis of the airplane inclined steeply downward **b** : a plunging descent or downward spiral **c** : a state of mental confusion (in a ~) **3** **a** : the rotation of an elementary particle on its axis or of a system of such particles in orbital motion that is responsible for measurable angular momentum and magnetic moment **b** : the angular momentum associated with such rotation — **spin-less** \ˈspɪn-ləs\ **adj**
spi-na bi-fi-da \ˈspi-nə-ˈbi-fəd-ə\ **n** [NL, lit., spine split in two] (1720) : a congenital cleft of the vertebral column with hernial protrusion of the meninges

spin-ach \ˈspɪn-ɪch\ **n** [MF *espinache*, *espinage*, fr. OSP *espinaca*, fr. Ar *isfānākh*, fr. Per] (1530) **1** : a potherb (*Spinacia oleracea*) of the goosefoot family cultivated for its edible leaves **2** **a** : something unwanted, insubstantial, or spurious **b** : an untidy overgrowth

spi-nal \ˈspɪn-əl\ **adj** (1578) **1** : of, relating to, or situated near the backbone **2** **a** : of, relating to, or affecting the spinal cord (~ reflexes) **b** : having the spinal cord functionally isolated (as by surgical section) from the brain (experiments on ~ animals) **3** : of, relating to, or resembling a spine

spinal **n** (1944) : a spinal anesthetic

spinal canal **n** (1845) : a canal that contains the spinal cord and is delimited by the arches on the dorsal side of the vertebrae

spinal column **n** (1836) : the axial skeleton of the trunk and tail of a vertebrate consisting of an articulated series of vertebrae and protecting the spinal cord — called also *backbone*

spinal cord **n** (1836) : the cord of nervous tissue that extends from the brain lengthwise along the back in the spinal canal, gives off the pairs of spinal nerves, carries impulses to and from the brain, and serves as a center for initiating and coordinating many reflex acts — see BRAIN illustration

spinal ganglion **n** (ca. 1860) : a ganglion on the dorsal root of each spinal nerve that is one of a series of ganglia lodging cell bodies of sensory neurons

spi-nal-ly \ˈspɪn-əl-ē\ **adv** (1885) : with respect to or along the spine
spinal nerve **n** (1793) : any of the paired nerves which leave the spinal cord of a craniate vertebrate, supply muscles of the trunk and limbs, and connect with the nerves of the sympathetic nervous system, which arise by a short motor ventral root and a short sensory dorsal root, and

spindle **vb** **spin-dled**; **spin-dlin** or grow into a long slender spike of a spindle file **2** : to with spindles — **spin-dler** \-dler\ **n** (1878) : a fusiform spindle cell
spin-dle-legged \ˈspɪn-dl-ˈlɛ\ long slender legs

spin-dle-shanked \-ˈʃaŋ(k)t\ **n** (1548) : any of shrubs, small trees, or vines of

spin-dling \ˈspɪn-(d)lɪŋ, -(d)lən\ **n** (1548) : any of shrubs, small trees, or vines of

spin-dly \ˈspɪn-(d)lɪ, -dɪ-ē\ **adj** or long and thin appearance: legs **2** : frail or flimsy in ap-

spin-drift \ˈspɪn-ˈdrɪft\ **n** [alter a strong wind + *E drift*] (182)

spine \ˈspɪn\ **n** [ME, thorn, *sp* spike of grain, OE *spitu* 'spit, COLUMN **b** : something reser-

central axis or chief support pointed plant process; **esp** : **c** : a sharp rigid process on an

mented fin ray of a fish **c** : **e** \ˈspɪnd\ **adj** — **spine-like** \-lɪ-

spi-nel or **spi-nelle** \ˈspɪ-nel\ (1528) **1** : a hard crystalline of magnesium and aluminum

black and is used as a gem essentially oxides of magnesium

spine-less \ˈspɪn-ləs\ **adj** (1827) **2** **a** : having no spinal colu-

of character — **spine-less-ly** **a**

spin-et \ˈspɪn-ət\ **also** **spin-et** the manner of plucking its s

having a single keyboard and compactly built small upright

spin fishing **n** (1950) : SPINNING

spi-ni-fex \ˈspi-nə-feks\ **n** [N make — more at DO] (1846) : *Spinifex* or *Triodia* with spin-

spin-na-ker \ˈspɪn-i-kər\ **n** [known] (1866) : a large tria-

set on a long light pole and running before the wind

spin-ner \ˈspɪn-ər\ **n** (13c) **1** spins **2** : a fisherman's lure

of a spoon, blade, or set of revolves when drawn through

3 : a conical sheet metal fair attached to an airplane pro-

and revolves with it **4** : arrow that is spun on its dial

the number or kind of move may make in a board game

spin-ner-et \ˈspɪn-ər-et\ **n** (18c) organ (as of a spider or cate

producing threads of silk fr- cretion of silk glands **2** or **sp** : a small metal plate, thimble

with fine holes through which forced in the spinning of man-

spin-ney \ˈspɪn-ē\ **n**, **pl** **spin-ne** thorn, fr. L *spina*] Brit (1597)

spin-ning \ˈspɪn-ɪŋ\ **n** (1855) : by use of a light flexible rod,

spinning frame **n** (1825) : a machine for spinning

spinning jen-ny \-ˈjen-ē\ **n** [Je multiple-spindle machine for

spinning reel **n** (1950) : a fishing line, is wound by means of to allow the line to spiral free

spinning rod **n** (1870) : a light reel

spinning wheel **n** (15c) : a machine for spinning yarn or

spin-off \ˈspɪn-ɔf\ **n** (1950) stockholders of particular ass

also : the new company creat or derived product or effect : ~s of missile research **3** : s

an earlier work; **esp** : a televi a secondary role of an earlier

spin off \ˈspɪn-ɔf\ **vt** (1950) : company spun off its comput

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